

102,688

PATENT



SPECIFICATION

Application Date, May 30, 1916. No. 7637/16.

Complete Left, Sept. 22, 1916.

Complete Accepted, Dec. 21, 1916.

PROVISIONAL SPECIFICATION.

**Improvements in Valves for Reducing the Pressure of Steam,
Air, or other Gases.**

I, FRANCIS THOMAS JENKINS, of Denmark Lodge, St. James, Hatcham, in the County of Kent, Engineer, do hereby declare the nature of this invention to be as follows:—

5 The object of my invention is to provide a simple and reliable appliance for reducing the pressure of steam, air or other gases.

My appliance is specially designed to reduce the pressure from air-reservoirs to that required for charging torpedoes, but it may be used for various other purposes.

10 My invention consists of a bored cylinder having at one end a packed piston capable of movement only by adjustment, by means of a small hand-wheel and thread or any other convenient method. At the other end of the cylinder is another packed piston which is free to move in either direction, but is normally pressed towards the extreme end of the cylinder by means of a spring, and prevented from further outward movement by a screwed cap, fitted in or on the
15 end of the cylinder. The outer end of the piston is slightly larger in diameter than the inner end, and works in a recess in the cap. A hole is bored through this piston from end to end. A hole is also bored partly through the adjustable piston, and another at right angles, leading to a recess in the cylinder, from which air is received through a branch provided with a screwed thread, or
20 other means of coupling to the supply pipe. A similar branch is provided to take off the air from the space between the two pistons.

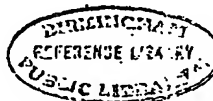
The action of the appliance is as follows:—Upon air being admitted to the cylinder, it passes inside the adjustable piston and thence along the hole in the free piston, and as the extreme end of this piston is largest in diameter, the
25 air forces it, in opposition to the spring, towards the adjustable piston and as its end is formed with a sharp edge, it acts as a valve and closes, or partly closes, the air outlet, accordingly as the adjustable piston is set with regard to the relative strength of the spring.

Suitable pressure gauges & relief valves are provided, and also an index
30 pointer for the adjustment.

Dated the 30th day of May, 1916.

FRANCIS THOMAS JENKINS.

[Price 6d.]



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COMPLETE SPECIFICATION.

**Improvements in Valves for Reducing the Pressure of Steam,
Air, or other Gases.**

I, FRANCIS THOMAS JENKINS, of Denmark Lodge, St. James, Hatcham, in the County of Kent, Engineer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The object of my invention is to provide a simple and reliable appliance for 5
reducing the pressure of steam, air or other gases.

My appliance is specially designed to reduce the pressure from air reservoirs to that required for charging torpedoes, but it may be used for various other 10
purposes.

My invention consists of a bored cylinder, having at one end a packed piston 10
capable of movement only by adjustment, by means of a small hand-wheel and thread, or any other convenient method.

At the other end of the cylinder is another packed piston, which is free to move in either direction, but is normally pressed towards the extreme end of 15
the cylinder by means of a spring, and prevented from further outward movement by a screwed cap fitted in or on the end of the cylinder. The outer end of the piston is slightly larger in diameter than the inner end, and works in a recess in the cap. A hole is bored through this piston from end to end. 20
A hole is also bored partly through the adjustable piston, and another at right angles to this, leading to a recess in the cylinder, from which the air is received through a branch provided with a screwed thread, or other means of coupling to the pressure pipe.

A similar branch is provided to take off the air from the space between the two pistons.

The action of the appliance is as follows:—Upon air being admitted to the 25
cylinder, it passes inside the adjustable piston, & thence along the hole in the free piston, and as the extreme end of this piston is larger in diameter, the air forces it, in opposition to the spring, towards the adjustable piston, and as its end is formed with a sharp edge, it closes or nearly closes the outlet of air 30
accordingly as the adjustable piston is set with regard to the relative strength of the spring.

Suitable pressure gauges and relief valves are provided and also an index-pointer for adjustment.

In the accompanying drawings, Fig. 1 is a sectional elevation and Fig. 2 a 35
plan of my appliance, as hereinbefore described.

The bored cylinder A. has an inlet branch B. and outlet branch C. and is provided with a plug D. at one end having a bored recess to take the outer end of the packed piston E. which is kept in its normal position by the spring F. The lower packed piston G. is capable of adjustment by means of the hand-wheel H. and may be locked in any position by the nut I. Leakage of pressure 40
into the atmosphere is prevented by the leather packing K and the plug L allows the piston to be readily removed.

The packing is preferably leather, except the rings under the plugs D. and L. which are of copper.

Having now particularly described and ascertained the nature of my said 45

invention, and in what manner the same is to be performed, I declare that what I claim is:—

The arrangement and combination of parts forming a reducing valve for steam, air or other gases, substantially as hereinbefore described and illustrated
5 in the accompanying drawings.

Dated this 22nd day of September, 1916.

FRANCIS THOMAS JENKINS.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1916

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[This Drawing is a reproduction of the Original on a reduced scale.]

